

Impact Assessment of Nomadic Education Extension Programme on Income of Nomads in Adamawa State Nigeria

ABSTRACT:

The study determined the impact of nomadic education extension programme co-ordinate by the national commission for nomadic education on income of nomads in Adamawa state, Nigeria. Data for the study were obtained from 360 respondents using multi-stage sampling procedures. Descriptive and inferential statistics used for data analysis were percentage, chi-squares (χ^2) and two samples T-test. The result of the study indicated that there was positive impact of the programme (NEEP) on income and income generating activities of the nomads. The nomads that participated in the programme had higher income than those that did not. Also those that participate were into diversified income generating activities than those that did not. Both chi-square analysis and test of means on income revealed that the programme had impact on the income of the nomads.

1.0 INTRODUCTION

The nomadic pastoralist are people that wonder from one place to another according to the dictates of the season. Ezeomah (1987) classified the nomadic pastoralist into two groups based on their mode of settlement. This group are the split movement groups (Fulbe Wuro) and total movement group (Fulbe Na'ai, Boroje). The pastoralist according to Tahir (1998) are made up of the Fulani with estimated population of 5.3 million, the Shuwa 1.0 million, the Baduman 35,000 and the fishermen 2.8 million.

Nomads are valuable national human resources. Livestock production and breeding in Nigeria is predominantly in the hands of nomadic pastoralist who constitute a major socio-economic group in the country's estimated 15.2 million cattle, 23 million sheep and 28 million goats with substantial holdings of other livestock species (FAO, 2006). Mohammed and Ardo (2010) opined that one of the operational strategies of nomadic education Extension programme is the provision of functional adult education programme for men and women involving income generating activities aimed at alleviating poverty among nomads.

The economic base of pastoralist according to Ardo (2000) depends on group herds, sells of milk and processed products. The sell of milk and dairy products are expended on family needs. Cattle from time to time are sold to take care of financial needs beyond subsistence such as medical bills, taxes, ceremonial expenses and clothing's.

Despite the above enormous contribution of nomads to national building, their participation in the existing formal and non-formal education were abysmally low with literacy rate ranging between 0.2% and 2.9% (Mohammad and Ardo 2010). In order to meet the educational needs of nomads, the Federal Government of Nigeria set up the national

commission for nomadic education (NCNE) in 1989. The aim of the commission was to educate the nomads in all ramification of life and to improve their standards of living through establishing nomadic school and provision of extension services. The actual intervention of NCNE in the provision of extension services according to Mohammad and Ardo (2010) began in 1996 to 1997. The nomadic education agents were posted to various nomadic communities to educate and enlightened postural nomads on the acquisition of relevant skills for the improvement of livestock production, provides practical lessons on animal health and husbandry, provide training for nomadic adult in numeracy on livestock number, ability to read labels and direction on drugs, encourage nomads to engage in self help projects, form co-operative societies and assist pastoralist to acquire appropriate skills, abilities and competence to contribute to development.

The impact of nomadic extension agents can be felt by assisting nomads to identify appropriate income generating activities through formation of cooperative society and encourage nomads to participate in poverty alleviation, food security and rural development activities (Saidu 2000). The commendable work of nomadic extension agents towards increasing income of nomads was seen through formation of 88 pastoralist cooperative societies and 10 of them benefited from FEAP loan across the country (Tahir 1999). The activities of nomadic extension cannot be achieved without education. Ezeomah (1982) contended that it is only through education that the live style and productive activities of nomads can be improved. The study therefore was designed to determine the impact of nomadic education programme activities on income of nomads in nomadic communities in Adamawa State Nigeria.

1.0 RESEARCH METHODOLOGY

A well structured questionnaire which was pre-tested for validity and reliability using test-retest method were administered to the respondents. The validity and reliability test of the items on the questionnaire were carried out in nomadic community in Digil Mubi North Local Government Area of Adamawa State. The result of the pre-test showed that the coefficient of reliability test was high ($r=0.84$) meaning that the items on the questionnaires were valid and reliable to measure the variables.

Purposive and multi-stage random samplings were employed for the study. The purposive sampling was used to select three Local Government Area in Adamawa state, namely Song Girei and Yola south where nomadic extension programme started as a pilot project. The multi stage sampling techniques was used to select nomadic communities and respondents in the selected local government areas. In the first stage, three communities were selected from each of the three local Government Areas giving a total of nine (9) communities used for the study. The

second stage was the selection of twenty respondents who were participants of nomadic extension programme from each of the nine communities using random sampling. The comprehensive list of the participating nomads were obtained from the nomadic extension agents in the study areas and used as the sampling frame. In the third stage, three communities were selected from non participating areas in each of the three Local Government Areas used for the study giving nine (9) communities. Twenty respondents were selected from each of the nine non-participating communities the total number of respondents used for the study was 360 i.e. 180 participants of nomadic education extension programme and 180 non participants. The data obtained was analyzed using descriptive and inferential statistics namely percentage, chi-square (χ^2) and two sample T-test.

3.0 RESULT AND DISCUSSION

Table 1. Indicated the income of the respondents. 51 percent of the respondents that received the intervention had income of ₦ 80,000 and above per annum as against 27.21 percent in non-participating communities. There are more respondents (27.78%) in non participating communities whose income was below ₦ 80,000 than participating communities. The reason for such difference in income in the two communities could be as a result of nomadic extension programme activities.

Table 1. Distribution of Respondents Based on income per Annum.

EARNING INCOME	PARTICIPATING		NON PARTICIPATING	
	F	%	F	%
Yes	180	100	180	100
No	0		0	
Income				
<20,000	15	8.33	30	16.67
20,000-39,000	59	32.78	71	39.44
40,000-59,000	12	6.67	18	6.67
60,000-79,000	4	2.22	12	6.67
80,000-99,000	5	2.78	20	11.11
100,000 and above	85	48.22	29	16.1

Source: Field Survey, 2011

Table 2. Signified that nomads under the nomadic education extension programme were more into diverse income generating activities than in communities without the programme. About 20.19% and 18.89% for instance, were engaged in crop production and other activities in nomadic communities, while 5.24% and 0.5% were engaged in crop production and other activities in non participating communities. This result, therefore, indicated that there were more respondents in communities that participated with diverse income generating activities than in communities that did not. This difference could be attributed to the activities of

nomadic extension agents of the NCNE who advises farmers to embrace diversified income generating activities. Crop production is gaining high acceptance by nomads in communities that had opportunities of coming in contact with nomadic extension agents.

Table 2. Distribution of Respondents Based on Income Generating Activities

Income Generating Activities	Participating		Non Participating	
	F	%	F	%
Animal Fattening	45	8.87	38	9.47
Cattle Production	146	27.55	110	27.43
Sheep Production	80	15.09	60	14.96
Goat Production	61	11.51	45	11.22
Poultry Production	54	10.19	36	8.98
Crop Production	107	20.19	21	5.24
Milk Production	25	4.72	89	22.19
Others	10	1.89	2	0.5

Source: Field Survey, 2011

Table 3. Showed that there was increase in earnings of nomads under nomadic education extension programme than in communities that did not. There were increase in income of participating nomads by 8.62% fattening, 8.14 sales of cattle, 21.8 %, sales of sheep 24 % sales of poultry, 15.23 % sales of crops and 47.02 % in other income generating activities over the income of those that did not participate. Apart from traditional sales of animals such as cattle, sheep, goat, and poultry, it was observed that nomads were also engaged in processing products such as cheese, (Mai Shanu), processed maize, sorghum and millet (Fura and Dambu). The nomads also engaged in weaving traditional caps and other traditional attires. These other activities add to their income. The difference in income from income generating activities could be as a result of advice by nomadic extension agents in the communities on the need to diversify their sources of income.

Table 3. Distribution of Respondents Based on Income from Income-Generating Activities

Income Generating Activities	Participation	Non participation	Difference	Percentage% Difference
Fattening	1,095.000	921,270	173,700	8.62
Sales of cattle	14,481.010	12,301.510	2,179,500	8.14
Sales of sheep	1,400.000	989,210	501,398	21.81
Sales of Goat	441,000	383,210	57,790	7.01
Sales of poultry	177.000	165.880	11,120	3.24
Sales of Crop	2,675.200	1,968,200	707,000	15.23

149	Sales of milk	61,380	60,820	560	0.46
150	Others	77,700	28,000	49,700	47.02
151	Source: Field Survey, 2011				

152 **Table 4.** Showed a difference in income of the two groups. There were higher income from
 153 income generating activities in participating communities than in those that did not. For
 154 instance, while nomads that receive the intervention had mean income of N6083.3 In animal
 155 fattening, the control group, had ₦ 5118.2 as their mean income. The mean differences in
 156 income from income generating activities were all positive. This difference could be attributed
 157 to the activities of nomadic extension agents posted to such communities. This result agreed
 158 with that of Bello et al (2011) who concluded in his study that nomadic education extension
 159 programme had positive impact on the pastoralist who gained knowledge and were actively
 160 involved in livestock related income generating activities through cooperative society and
 161 management.

162 **Table 4. Mean Income from Income Generating Activities.**

163				
164	Income Generating	Mean income	Mean income of	Difference in
165	Activities	of Participation (N)	Non participation (N)	Mean
166				
167	Animal Fattening	6083.3	5118.2	965.17
168	Sales of cattle	80450	68342	12108
169	Sales of sheep	10413	5495.6	4917.7
170	Sales of Goat	2450	2128.9	321.06
171	Sales of poultry	983.33	919.61	63.722
172	Sales of Crop	14626	11406	3580.7
173	Sales of milk	354.56	341	13.556
174	Others	431.67	155.56	276.11

175 **Source: Field Survey, 2011**

176 **Table 5.** The summary of the Chi-square (X^2) analysis of the relationship between participation
 177 in nomadic education extension programme and income level. It revealed that there is
 178 significant relationship between participation in Nomadic Education Extension Programme and
 179 level of income of the nomads. This means that Nomads who participated in Nomadic
 180 Education Extension Programme had income level higher than those that did not. Participation
 181 in Nomadic Education Extension Programme increase income and hence changes in income
 182 level, as a result of knowledge gained from change agents. Also the Chi-square (X^2) analyses on
 183 the relationship between participation and income generating activities showed a significant
 184 relationship in (Table 5). The nomads who participated in Nomadic Education Extension

Programme were more into different income generating activities than those that did not. The major reason of change in income level was as a result of extension activities which improve the income of nomads. The nomadic extension agents educated nomads, on the need to participate in diversified income generating activities to boost their income.

Table 5. The Relationship between Participation in Nomadic Education Extension Programme and Income.

Income	df	X ² Cal	X ² Tab	Remarks
Income Level	4	17.81	13.81	Significant
Income Generation activities	7	97.94	24.32	Significant
At 0.01				

Source: Field Survey, 2011

The two sample **T-test** as shown in table 6 revealed that there were statistical significant difference in means between participating and non-participating in the sales of sheep and crops. The P-value for the sales and crops were less than the critical P value of 0.05. Also the T cal for sheep (4.13) and crops (2.04) were greater than T critical (1.96). Since P value < P critical and T cal > T critical, it means that there were mean difference in sales of sheep and crops in the two communities. Though all other income generating activities had positive means difference, they were not statistically significant. This result therefore signified that nomadic education extension programme had impact on sales of sheep and crops but the impact was not yet felt in fattening, sales of goats, sales of poultry and other income generating activities. This suggests that extension agents **need** to advice nomads on marketing of their animals.

Table 6. Test of Means of Income from Income Generating Activities.

95% CI for Difference

INCOME GENERATING ACTIVITIES	MEAN INCOME PARTICIPATING	MEAN INCOME NON PARTICIPATING	DIFFERENCE	DF	T	P	LOWER	UPPER	
Fattening	6083.3	5118.2	965.17	353.5	0.89	0.373	-1165.3	3095.6	
Sales of cattle	80450	68342	12108	357.1	1.38	0.1694	-518512	29402	
Sales of sheep	10413	5495.6	4917.7	317.9	4.13	0.0000	2573.3	7263.1	
Sales of Goat	2450	2128.9	321.06	333.6	0.64	0.5254	-672.42	1314.5	
Sales of poultry	983.33	919.61	63.722	351.7	0.031	0.7605	-347.13	474.57	
Sales of Crop	14626	11406	3580.7	332.7	2.04	0.0422	127.64	7033.7	

221	Sales of milk	354.54	341	13.554	349.7	0.26	0.7955	-116.35	89.239
222	others	431.67	155.54	276.11	340.3	14.44	0.1518	-101.97	654.19

Source: Field Survey, 2011

CONCLUSION:

The findings reported in this paper suggest that it is through education that the income of nomads could be improved. Nomadic education extension programme had positive and significant impact on the income and the income generating activities of the nomads. However, since the nomads constitute an important sector of Nigerian economy, their integration into the main economy through more development programme provide a good thresh hold for them to actualize their income generating potential.

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